

**AMENDMENTS TO THE DRAWINGS**

The attached sheets of drawings include Figs. 1-3. The sheets which include Figs. 1-3, replace the original sheets including Figs. 1-3. Figs. 1-3 have been labeled as "PRIOR ART".

Attachments: Replacement Sheets

**REMARKS**

Claims 1-3, 5-9 and 12-13 are pending in this application. Claims 1-3 and 5 have been amended. Claims 10-11 have been cancelled since these claims are directed to a non-elected invention. Claims 12-13 have been added. No new matter has been added.

**35 U.S.C. §112**

Claim 5 has been amended to overcome the rejection under 35 U.S.C. §112, second paragraph rejection.

**Drawings**

Applicants have labeled Figures 1-3 “PRIOR ART”, as required. As for Figure 4, however, Applicants note that the figure is not prior art. See page 19, line 26 to page 20, line 2, which explains that figure 4 is a view showing a specific functional relationship between a recording magnetic domain shape and a magnetic flux detecting means in a conventional thermal-magnetic recording apparatus. The invention is directed to the adjustment of the orientation of the magnetic flux detecting element in accordance with the radial position of the magnetic domain to be detected by the magnetic flux detecting element and formed by the circular light spot in thermally assisted magnetic recording, which is not in the prior art. Rather, Figure 4 shows the analysis of the positional relationship occurring in a conventional thermal-magnetic recording apparatus and such analysis is identified by the applicants as part of the invention. Accordingly, Applicants request that the requirement to label Figure 4 with the legend “PRIOR ART” be withdrawn.

**35 U.S.C. §§ 102 and 103**

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by JP 11-096608, which is equivalent to U.S. Patent No. 6,317,280 (Nakajima). Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over either the acknowledged prior art or Nakajima, further considered with Fuji et al., U.S. Patent No. 6,876,603 or alternatively with Fuji et al. and Kojima, U.S. Patent No. 6,603,619. Claim 3 is

rejected under 35 U.S.C. §102(b) as being anticipated by either Nakajima or Fuji. Claim 6 is rejected as being unpatentable over the prior art applied to claim 2 and further in view of Novotny et al., U.S. Patent No. 6,603,713. Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over the prior art applied to claim 3, and further in view of JP-05-298737. Claims 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over the prior art applied to claim 2, and further in view of Yonezawa et al., U.S. Patent No. 5,296,995. Applicants request reconsideration of these rejections in view of the foregoing amendments and the following reasons.

Independent claims 1-3 have been amended to clarify that which the Applicants regard as the invention. In particular, claim 1 has been amended to include that the orientation of a longitudinal direction of the magnetic flux detecting means is changed in accordance with a radial position of the magnetic recording domain to be detected, and the thermal distribution direction is changed in accordance with the radial position of the magnetic recording domain to be formed by the partial heating of the recording medium so that the magnetic wall orientation of the magnetic recording domain is aligned with respect to the longitudinal direction of the magnetic flux detecting means. The amendment to claim 1 is supported by Figures 10 and 12 and the description of embodiment 2 of the invention beginning on page 33 of the specification.

Claim 2 has been amended to include that the difference between a radial position of the heating means when heating partially the recording medium to form the recording magnetic domain and a radial position of the magnetic flux detecting means when detecting the magnetic flux generated by the recording magnetic domain is changed in accordance with a radial position of a recording track to be scanned when heating partially the recording medium to form the recording magnetic domain and detecting the magnetic flux generated by the recording magnetic domain so that a magnetic wall orientation of the magnetic recording domain is aligned with respect to a longitudinal direction of the magnetic flux detecting means. Support for the amendment to claim 2 is found in Figures 7 and 8 of the drawings and their description on page 27, line 19 to page 31, line 28 of the specification.

Claim 3 has been amended by Applicants to include that the orientation of a thermal distribution generated by the partial heating of the recording medium for forming the recording magnetic domain is rotated in accordance with a radial position

of the recording magnetic domain to be formed so that a magnetic wall orientation of the recording magnetic domain is aligned with respect to a longitudinal direction of the magnetic flux detecting means. Support for the amendment to claim 3 is also found with respect to Figures 10 and 12 and the specification describing these figures beginning at page 33 of the specification.

Nakajima discloses a thermo magnetic recording and reproducing head used in a thermal magnetic recording and reproducing device 70. Head 50 includes a recording-use magnetic head 2 and a magnetic head 3, as well as heating head 4 having a heating section 12. According to Nakajima, the effective width (L2) of the heating head 4 is made narrower than the width (L1) of each of the recording-use magnetic head 2 and the reproduction-use magnetic head 3. See column 7, lines 44-52 of Nakajima, for example. Nakajima does not refer to the orientation or directionality of the thermal distribution by the heating head, as recited in claim 1 of the present invention. Claim 1 states that the thermal distribution direction is changed in accordance with the radial position of the magnetic recording domain to be formed by the initial heating of the recording medium so that the magnetic wall orientation of the magnetic recording domain is aligned with respect to the longitudinal direction of the magnetic flux detecting means. Accordingly, claim 1 is not anticipated by Nakajima.

Claim 2 is not rendered obvious by Nakajima when considered in combination with Fuji or Kojima. In particular, claim 2 refers to a change in the difference between a radial position of the heating means when heating partially the recording medium to form the recording magnetic domain and a radial position of the magnetic flux detecting means when detecting the magnetic flux generated by the recording magnetic domain, which is changed in accordance with a radial position of a recording track to be scanned when heating partially the recording medium to form the recording magnetic domain and detecting the magnetic flux generated by the recording magnetic domain so that a magnetic wall orientation of the magnetic recording domain is aligned with respect to a longitudinal direction of the magnetic flux detecting means. None of Nakajima, Fuji or Kojima refer to changes in the difference between these positions. Accordingly, the combination of Nakajima, Fuji and Kojima is insufficient to render the claim 2 obvious under 35 U.S.C. §103(a).

With respect to claim 3, Lee is also applied to the Nakajima and Fuji

combination. However, the combination of these references does not suggest to one having ordinary skill in the art that the orientation of the thermal distribution generated by the partial heating of the recording medium performing the recording magnetic domain is rotated in accordance with the radial position of the recording magnetic domain to be formed so that a magnetic wall orientation of the recording magnetic domain aligned with respect to the longitudinal direction of the magnetic flux detecting means, as claimed by Applicants. Accordingly, the 35 U.S.C. §103(a) rejection of claim 3 should be withdrawn.

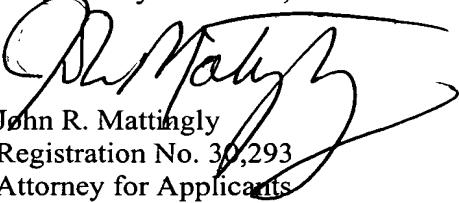
In the rejection of dependent claims 4-9, JP 05-298737 and Yonezawa are further cited. However, neither of these references makes up for the insufficiencies in the prior art applied to claims 1-3. Therefore, each of the dependent claims should be found to be allowable, at least or depending from an allowable base claim.

Applicants have added new dependent claims 12 and 13, which are respectfully dependent from claims 1 and 3. Accordingly, claims 12 and 13 should be found to be allowable over the art of record for the forgoing reasons.

### **CONCLUSION**

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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